

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: LUMARK

Report Number: P196572

Luminaire Tested: **NAV-AF-06-D-UNV-SL2-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196572
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-06-D-UNV-SL2-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 27595.6 lumens
Efficiency: N/A
Efficacy: 110.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

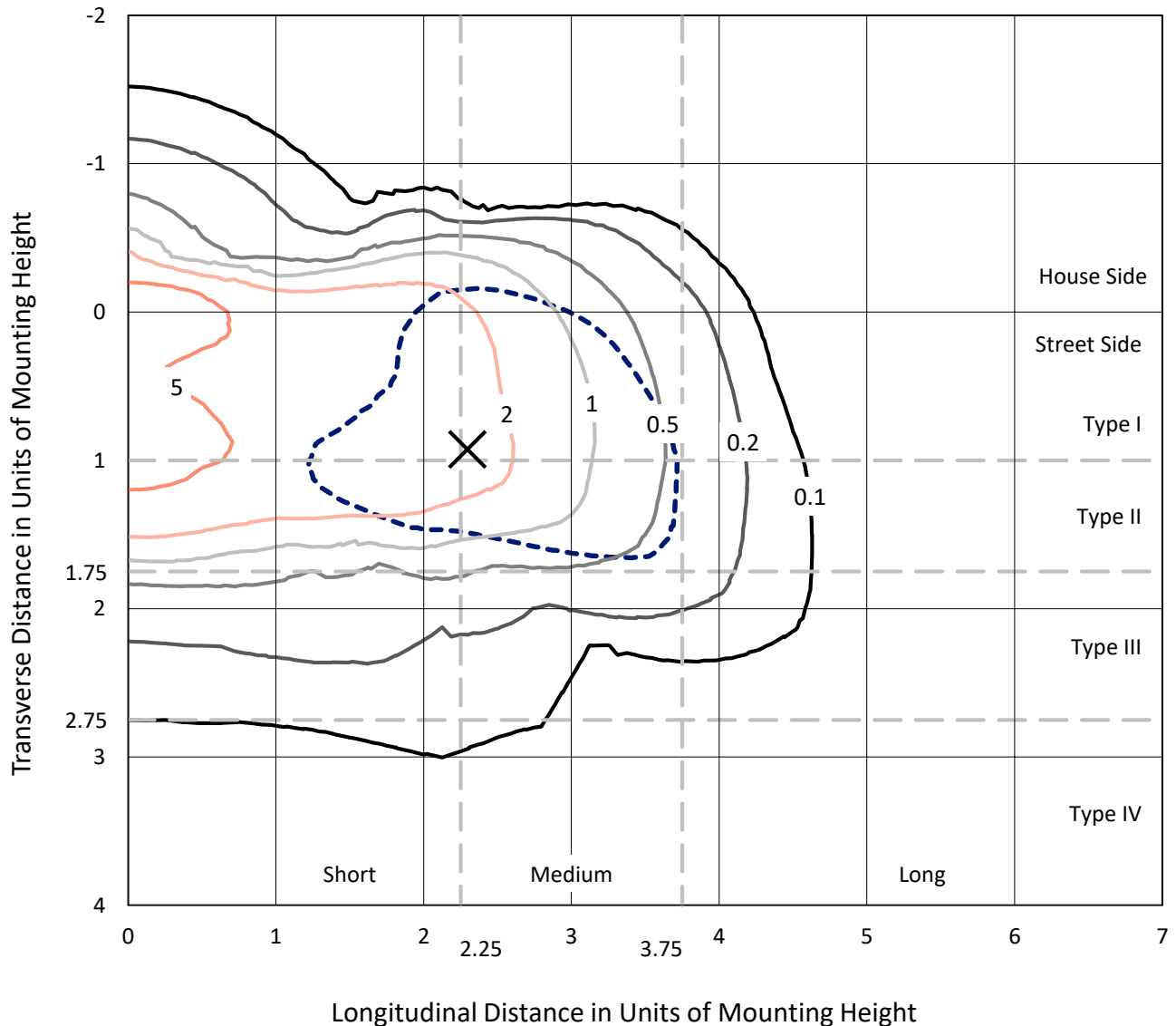


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Iso-Footcandle Lines of Horizontal Illumination

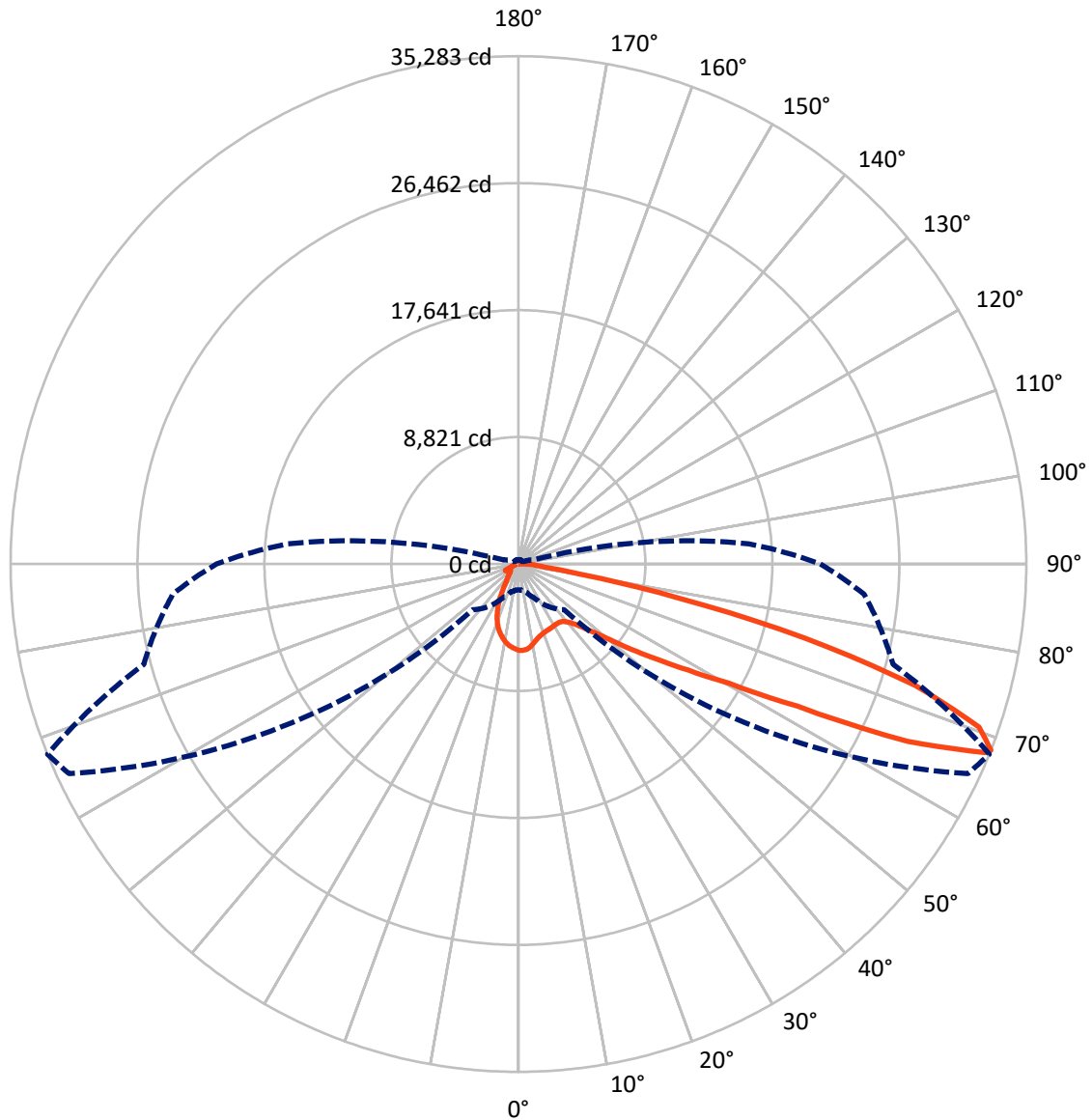
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.6 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4514.7	0.0	4514.7
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	23080.9	0.0	23080.9
	% Fixture	83.6	0.0	83.6
Total	Lumens	27595.6	0.0	27595.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	514.5	1.9
10°-20°	1193.3	4.3
20°-30°	1613.9	5.8
30°-40°	2275.5	8.2
40°-50°	3741.8	13.6
50°-60°	5800.1	21.0
60°-70°	7520.2	27.3
70°-80°	4315.5	15.6
80°-90°	620.9	2.2
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	27595.6	100.0
0°-180°	27595.6	100.0



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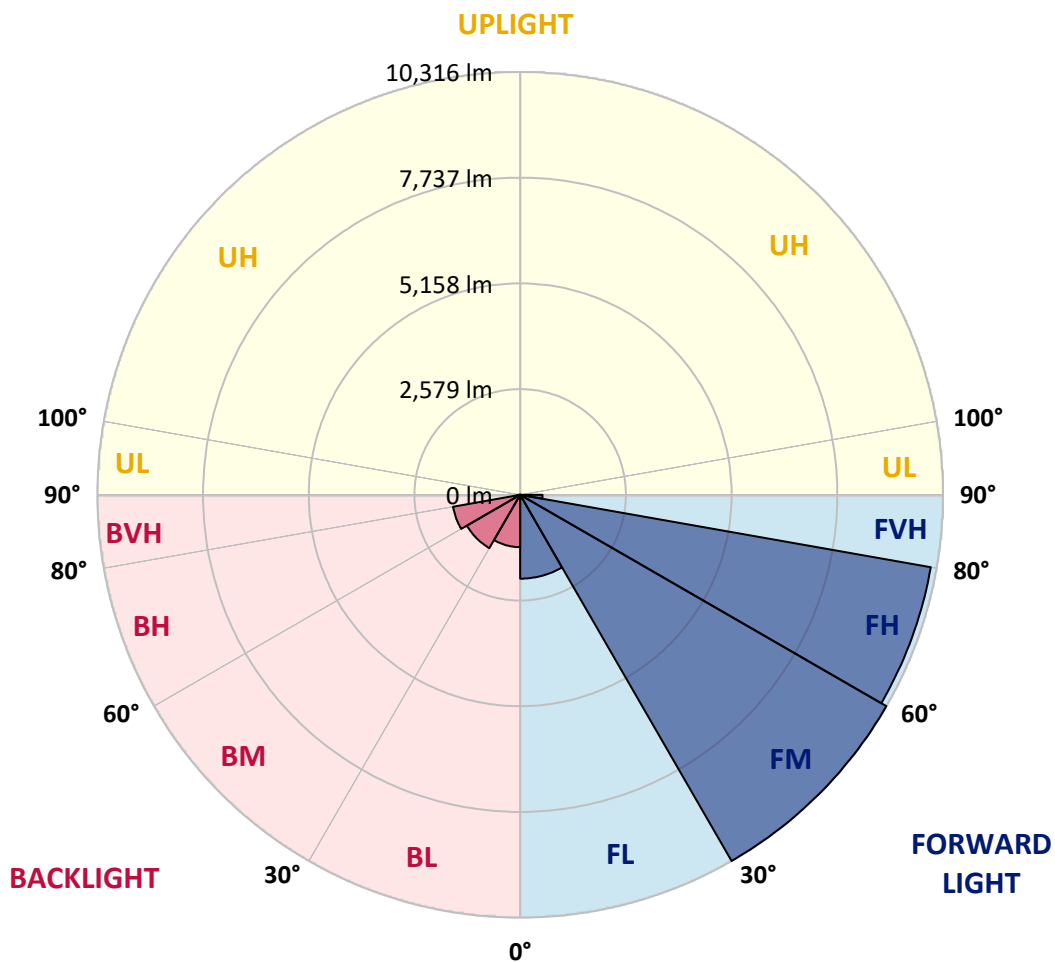
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2045.3	7.4			
FM (30°-60°)	10315.7	37.4			
FH (60°-80°)	10173.0	36.9			G4/12000
FVH (80°-90°)	546.9	2.0			G4/750
BL (0°-30°)	1276.3	4.6	B3/2500		
BM (30°-60°)	1501.7	5.4	B2/2500		
BH (60°-80°)	1662.7	6.0	B3/2500		G3/2500
BVH (80°-90°)	74.0	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	6004.6	6004.6	6004.6	6004.6	6004.6	6004.6	6004.6	6004.6	6004.6	6004.6	6004.6
2.5°	5844.2	5891.0	5891.0	5925.2	5955.9	5981.1	6002.7	6002.7	6002.7	5988.3	5975.7
5°	5229.4	5292.5	5301.6	5388.0	5501.6	5640.4	5795.4	5932.4	5959.5	6010.0	6029.8
7.5°	4802.2	4822.0	4856.2	4915.8	5031.2	5202.4	5445.7	5752.2	5826.1	5984.6	6067.6
10°	4499.4	4515.5	4544.4	4603.9	4708.4	4863.4	5103.3	5501.6	5624.2	5905.5	6069.5
12.5°	4277.6	4290.3	4317.3	4371.4	4477.8	4616.5	4861.7	5276.3	5427.7	5826.1	6094.7
15°	4104.6	4126.1	4147.8	4200.2	4308.3	4441.7	4690.4	5112.2	5276.3	5763.0	6141.6
17.5°	4036.0	4046.9	4050.5	4077.5	4174.9	4310.1	4558.9	4996.9	5166.4	5712.5	6177.6
20°	4079.3	4081.2	4045.1	4027.1	4082.9	4207.3	4448.9	4910.3	5083.4	5667.5	6192.0
22.5°	4268.6	4268.6	4174.9	4095.6	4057.7	4135.3	4375.0	4850.9	5038.4	5633.2	6192.0
25°	4629.2	4612.9	4466.9	4310.1	4142.4	4110.0	4328.1	4813.0	5004.1	5615.2	6168.6
27.5°	5103.3	5088.9	4903.1	4670.7	4367.7	4164.1	4311.9	4782.4	4969.8	5588.2	6118.1
30°	5680.1	5667.5	5456.5	5151.9	4704.8	4335.3	4349.7	4760.8	4942.8	5543.0	6033.4
32.5°	6255.1	6247.9	6080.3	5768.5	5169.9	4625.6	4448.9	4757.1	4928.3	5488.9	5930.7
35°	6833.7	6833.7	6731.0	6467.8	5795.4	5061.8	4656.2	4823.8	4955.5	5460.1	5842.3
37.5°	7688.2	7653.9	7462.9	7190.7	6583.2	5627.8	4991.5	4964.4	5060.1	5508.9	5813.4
40°	9011.3	8912.2	8434.5	7976.6	7443.1	6352.5	5481.7	5236.7	5294.3	5674.7	5882.0
42.5°	10395.8	10238.9	9606.2	8874.4	8331.8	7246.6	6125.3	5678.3	5676.4	5995.5	6100.1
45°	11583.6	11502.6	10817.5	9889.3	9346.6	8252.5	6938.3	6334.5	6269.6	6493.1	6520.1
47.5°	12274.0	12220.0	11807.2	10963.6	10550.8	9440.3	7969.4	7244.8	7122.2	7255.6	7214.2
50°	12083.0	12135.3	12016.4	11585.6	11845.2	11109.6	9283.5	8492.1	8259.7	8393.1	8292.1
52.5°	11077.1	11217.7	11324.0	11407.0	12589.6	13343.1	10934.7	10049.6	9856.9	9833.4	9736.0
55°	9265.5	9489.0	9824.4	10433.6	12389.5	15136.7	13819.0	11933.4	11652.2	11504.4	11542.2
57.5°	6305.6	6644.5	7367.4	8526.5	11349.3	15901.0	18083.9	14366.9	13891.1	13364.7	13487.3
60°	3473.7	3756.7	4616.5	5784.6	8975.3	15787.4	21864.1	18321.9	16824.0	15428.7	15681.1
62.5°	2247.9	2309.2	2949.1	3951.4	5508.9	13937.9	23964.2	24932.2	21757.8	18150.7	18505.8
65°	1806.3	1849.5	2163.2	3187.1	3837.8	8966.3	24057.9	31789.4	29696.5	21849.6	21860.5
67.5°	1764.7	1784.6	1966.6	2680.4	3599.9	4881.4	20795.1	34493.3	34978.3	26215.6	24104.8
68°	1790.0	1813.4	1997.3	2597.6	3598.0	4499.4	19219.7	34451.8	35282.9	26945.7	24104.8
70°	1579.2	1608.0	2036.9	2687.7	3444.8	3868.5	13161.1	32622.2	33959.8	28624.0	22871.8
72.5°	825.6	802.2	1007.7	2121.7	3877.5	4030.7	6952.7	27253.9	28815.1	26509.5	19760.4
75°	643.5	585.8	564.3	838.2	3410.5	4180.3	4037.9	19371.0	20550.0	19109.7	13208.0
77.5°	605.8	535.4	494.0	495.7	1501.5	4349.7	3266.5	11399.8	11399.8	9115.9	4214.5
80°	486.7	421.8	394.8	450.7	724.6	4009.0	3408.8	5195.2	4430.9	2356.0	1160.9
82.5°	320.9	286.6	288.5	365.9	549.8	2676.9	3947.7	2565.2	1927.0	1043.8	683.2
85°	203.7	174.9	194.7	256.0	411.1	1193.3	3908.1	1782.8	1276.2	585.8	340.7
87.5°	102.7	79.3	97.4	133.4	250.5	342.5	3217.6	1591.7	946.4	243.3	185.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	6004.6	6004.6	6004.6	6004.6	6004.6	6004.6	6004.6	6004.6	6004.6	6004.6	6004.6
2.5°	5975.7	5936.0	5916.3	5883.8	5844.2	5804.5	5777.4	5764.8	5757.6	5761.2	5759.4
5°	6019.0	5966.7	5882.0	5761.2	5636.8	5505.2	5404.3	5326.7	5278.1	5263.7	5260.1
7.5°	6051.5	5975.7	5817.1	5597.2	5384.4	5153.8	4957.2	4800.5	4694.0	4645.3	4643.6
10°	6046.0	5948.7	5698.1	5373.6	5061.8	4722.8	4414.6	4151.5	3960.4	3868.5	3864.8
12.5°	6051.5	5918.0	5552.1	5112.2	4665.2	4180.3	3722.5	3313.3	3028.4	2893.1	2887.8
15°	6073.0	5885.6	5402.5	4820.2	4201.9	3516.9	2862.6	2348.8	2089.2	2000.9	2000.9
17.5°	6071.2	5831.5	5229.4	4481.4	3652.1	2734.5	1954.1	1636.8	1611.6	1692.7	1705.3
20°	6035.2	5745.0	5005.9	4079.3	3006.9	1892.8	1325.0	1279.9	1481.8	1705.3	1730.5
22.5°	5979.3	5633.2	4748.1	3612.4	2255.1	1233.0	1022.1	1090.6	1364.5	1642.1	1681.8
25°	5901.8	5498.0	4452.6	3069.8	1499.8	886.8	852.7	937.3	1130.3	1315.9	1344.8
27.5°	5788.2	5326.7	4129.8	2482.3	957.2	730.1	742.6	802.2	885.1	964.4	980.6
30°	5645.9	5126.7	3778.3	1831.5	726.5	652.6	674.1	710.1	746.2	796.7	807.5
32.5°	5501.6	4923.0	3412.3	1258.2	634.6	611.1	632.7	652.6	683.2	717.4	724.6
35°	5371.8	4733.6	3035.7	877.9	594.9	584.1	594.9	607.5	638.2	672.4	676.0
37.5°	5278.1	4578.7	2642.7	694.1	571.4	560.6	566.1	571.4	607.5	658.0	663.4
40°	5265.5	4476.0	2244.3	623.8	553.4	538.9	535.4	538.9	585.8	643.5	649.0
42.5°	5388.0	4481.4	1854.9	594.9	538.9	522.8	508.4	515.6	557.0	602.1	605.8
45°	5678.3	4607.6	1517.8	582.3	526.4	513.7	492.1	495.7	515.6	538.9	542.6
47.5°	6190.2	4883.4	1260.1	575.0	515.6	504.8	477.7	466.9	468.7	481.3	481.3
50°	7008.7	5344.8	1103.2	567.8	506.5	486.7	456.0	434.5	429.1	436.3	438.0
52.5°	8229.0	6136.1	1027.5	553.4	490.3	463.3	429.1	407.4	398.4	405.6	405.6
55°	9878.4	7399.8	991.4	533.6	470.5	434.5	403.8	385.8	378.6	383.9	383.9
57.5°	11758.6	9042.0	1052.7	506.5	445.2	403.8	382.2	369.6	364.2	369.6	371.4
60°	13992.0	11190.8	1474.6	472.3	418.3	376.7	364.2	356.9	353.4	358.7	358.7
62.5°	16961.0	14049.6	2282.1	445.2	389.4	351.5	347.9	344.2	340.7	346.2	346.2
65°	20166.0	16650.9	2348.8	429.1	364.2	329.9	331.7	331.7	328.1	333.5	333.5
67.5°	21186.4	16425.6	1312.3	409.1	333.5	308.2	315.4	315.4	313.7	319.0	317.3
68°	20970.0	16068.6	1142.9	403.8	328.1	302.8	310.1	311.8	310.1	315.4	313.7
70°	19358.4	14107.3	751.7	373.1	304.7	284.8	295.6	297.4	295.6	302.8	301.0
72.5°	15980.3	10581.4	555.2	326.2	275.8	261.3	272.2	274.0	275.8	283.0	281.3
75°	10148.8	5844.2	438.0	277.6	246.9	234.4	245.2	250.5	254.1	265.0	259.6
77.5°	2779.7	1773.9	355.1	236.1	212.7	207.3	214.4	221.7	225.3	237.9	228.9
80°	973.4	784.2	295.6	200.1	176.7	174.9	182.0	189.2	192.9	203.7	192.9
82.5°	591.3	512.0	236.1	156.8	138.8	137.0	146.0	153.2	156.8	156.8	149.5
85°	308.2	270.4	173.0	110.0	95.5	90.1	106.3	115.4	117.1	115.4	110.0
87.5°	173.0	153.2	91.9	52.2	43.2	45.1	55.8	68.5	73.9	72.1	68.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)